

REMARKS

Claims 9-13 are pending in this application. By this Amendment, claim 9 is amended. The amendments introduce no new matter because they are supported at least by the discussion in Applicants' disclosure at page 12, line 27 - page 14, line 18. A Request for Continued Examination is attached. Reconsideration of the application based on the above amendments and the following remarks is respectfully requested.

The Office Action, on page 2, rejects claims 9-11 and 13 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,110,660 to Kriz et al. (hereinafter "Kriz") in view of U.S. Patent No. 5,978,694 to Rapoport and further in view of U.S. Patent No. 3,858,111 to Simpson. The Office Action, on page 5, rejects claim 12 under 35 U.S.C. §103(a) as being unpatentable over Kriz in view of Rapoport and further in view of Simpson and further in view of U.S. Patent No. 5,679,342 to Houghton et al. (hereinafter "Houghton"). These rejections are respectfully traversed.

The Office Action, on page 4, concedes that a combination of Kriz and Rapoport fails to teach all of the features positively recited in independent claim 9. Specifically, the Office Action concedes that this combination of applied prior art references does not teach determining the difference in resonant frequency of a tuned circuit which is connected to a phase locked loop comprising a driver which generates a driving signal, and base comparator for determining the phase difference between the driving signal and an output signal obtained from the tuned circuit. Rather, in like manner to the previous Office Action, this Office Action relies upon Simpson as allegedly teaching these features.

As was argued previously and discussed in an April 19 personal interview with the Examiners, Simpson cannot reasonably be considered to teach, or to have suggested, the features that the Office Action concedes, a combination of Kriz and Rapoport fail to teach. In response to Applicants' previously having made arguments in this regard, both during the

personal interview and in Applicants' previous response, this Office Action responds to those arguments asserting that simply because Simpson may be alleged to include a driver and phase comparator, Simpson can reasonably be considered to at least suggest the features recited in the pending claims. This analysis of the Office Action fails for at least the following reasons.

Claim 9 recites, among other features, determining the number of miatic particles bound to the substrate by determining the difference in the resonant frequency of a tuned circuit when the substrate is exposed to amend magnetic field generated by a coil and when the substrate is not exposed to the magnetic field generated by the coil wherein the tuned circuit is connected to a phase locked loop comprising a driver which generates a driving signal for driving the tuned circuit, and a phase comparator for determining the phase difference between the driving signal and an output signal obtained from the tuned circuit, the phase comparator being adapted to generate a difference signal representative of said phased difference, said difference signal being fed back to said driver so as to cause said driver to drive the tuned circuit to reduce the determined phase difference.

To any extent that the phase sensitive detector used to facilitate measurement of in-phase and quadrature signals at resonance in Simpson continues to be asserted as corresponding to the phase locked loop recited in the pending claims, neither the previous Office Action or this Office Action show, in such detail to provide Applicants a capacity to adequately respond to the rejections, such a phase locked loop. In fact, the Office Actions simply assert, in a conclusory manner, that such a phase locked loop must be present based on the combination of elements shown Fig. 1. To any extent that the position is maintained that the combination of elements shown in Fig. 1, or otherwise disclosed in Simpson, may be considered, in some combination, to represent a phase locked loop, there is nothing in Simpson's disclosure, particularly where Simpson positively asserts that any return signal can

be changed by adjusting the phase shifter, that can reasonably be relied upon to teach, or to have suggested, the phase comparator being adapted to generate a difference signal representative of said phase difference, said difference signal being fed back to said driver to cause said driver to drive the tuned circuit to reduce the determined phase difference, as is positively recited, among other features, in independent claim 9.

For at least this reason, the combination of the applied references cannot reasonably be considered to have suggested the combination of all of the features positively recited in independent claim 9. Further, claims 10-13 also would not have been suggested by any permissible combination of the applied prior art references for at least the respective dependence to these claims directly or indirectly on an allowable independent claim 9, as well as for the separately patentable subject matter that each of these claims recites. With respect to claim 12, this is true because the Office Action does not apply Houghton in a manner that would overcome the above-identified shortfall in the application of the combination of the other applied prior art references to the subject matter of independent claim 9, from which claim 12 depends.

Accordingly, reconsideration and withdrawal of the rejections of claims 9-13 under 35 U.S.C. §103(a) as being unpatentable over any combination of the applied prior art references, as enumerated in the Office Action, are respectfully requested.

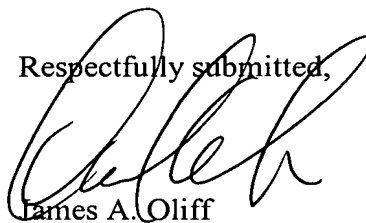
Applicants respectfully reassert their concern regarding the piecemeal examination of this application to date. Applicants believe that they have been improperly prejudiced based on significant time and resources that Applicants have been forced to expend to respond to a series of disparate and discontinuous rejections of the subject matter of the pending claims. It is for at least this reason that Applicants respectfully request, in any ongoing rejection of the subject matter of the pending claims, particularly in keeping with the spirit and intent of MPEP §707.02, that Examiner Do's Supervisory Patent Examiner be personally involved in

any further communication that may issue regarding the status of this application. Applicants do not feel that their concerns in this regard, particularly as specifically enumerated in the April 11, 2006 Request for Reconsideration, have been adequately addressed.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 9-13 are earnestly solicited. As indicated above, the deference of the Patent Office, and specifically the Examiner's Supervisory Patent Examiner, are respectfully requested based on the course of prosecution of this application to date.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the Applicants' undersigned representative at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Petition for Extension of Time
Request for Continued Examination

Date: December 8, 2006

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